

SYSTEM AND METHOD FOR ROUTING AN ELECTRONIC MAIL TO A BEST  
QUALIFIED RECIPIENT BY USING MACHINE LEARNING

Field of the Invention

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The present invention relates to an electronic mail system and method; and, more particularly, to an electronic mail (e-mail) system and method for forwarding an e-mail received in data network to a best qualified recipient by using machine learning.

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Description of the Prior Art

Recently, communications via electronic mail resources are becoming increasingly popular. One such electronic mail resource is generally known as e-mail. E-mail provides a quick and convenient way for computer users to communicate. E-mail has recently become one of the most commonly used communications tools in business. As more and more homes are getting connected to the Internet, it certainly will become an important communications tool for homes also.

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In general, a user to whom a message is sent is referred to as an addressee or recipient of the message and a user who sends the message is referred to as a sender. In the simplest case, an e-mail makes a delivery of a text-based message from a sending computer to one or more

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recipient computers. The sending and the recipient computers are connected to a data network. Typically, the message is temporarily stored in a mail server of the data network. The recipient (user) can retrieve the stored  
5 message at his/her convenience.

This communication is initiated by the message sender who composes the message by using a text editing program, provides an e-mail address of the intended recipient, and often provides an indication of the content (subject matter)  
10 of the message by providing text in a "subject" field. By using well-known technology, this composed message is then sent to the recipient's address.

The sender who transmits the composed message must know the correct recipient's e-mail address because the  
15 mechanics of the Internet require an exact e-mail address. However, it is difficult for the sender to correctly know all the corresponding associated recipient's e-mail addresses as an organization, such as a company or a division within a company, expands and the number of users  
20 increases.

In this case, the sender may attempt to transmit the e-mail message to recipients having e-mail addresses similar to that of the intended recipient, or to all recipients. However, this attempt not only increases unwanted messages  
25 for the unintended recipients but also increases e-mail traffic, which in turn deteriorates the efficiency of the

communications system, while the real intended recipient may not receive the e-mail message at all. Therefore, there is a need for an e-mail system capable of forwarding the e-mail to the real intended recipient even though the e-mail sender  
5 does not know the correct recipient's e-mail address.

#### Summary of the Invention

It is, therefore, an object of the invention to  
10 provide an e-mail system capable of forwarding an e-mail to an intended recipient even though an e-mail sender does not know a correct e-mail address of the intended recipient.

In accordance with the present invention, there is provided a method for forwarding an e-mail with an  
15 unspecified recipient, which is received via a mail server, to a best qualified recipient, comprising steps of:

building learning models corresponding to recipients from e-mails stored in a mail server using a machine learning algorithm; and

20 classifying, when a new e-mail is received, a learning model corresponding to a best qualified recipient and delivering the new e-mail to the best qualified recipient.

#### Brief Description of the Drawings

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The above and other objects and features of the